AMENDED LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in this application:

1. (Currently amended) A method for determining resonant frequencies of electromagnetic ~~radiation~~ emission for influencing a medium surrounding a target ~~genomic material~~ nucleic acid chain, ~~the genomic material~~ said nucleic acid chain ~~surrounded by a medium~~ being sensitive to the electromagnetic response characteristics of the surrounding medium, comprising:

providing a ~~frequency-emitting~~ device capable of producing a frequency-influenced electric field, or magnetic field, or electromagnetic field, or electrical current emission;

determining a velocity for the propagation of ~~the~~ electromagnetic ~~radiation~~ emission through the medium surrounding the ~~genomic material~~ target nucleic acid chain;

determining a ~~wavelength~~ length parameter of the ~~genomic material~~ target nucleic acid chain when said target nucleic acid chain material consists of double-stranded or single-stranded molecules consisting of deoxyribonucleic acid or ribonucleic acid; ~~the genomic material~~ said target nucleic acid chain comprising a plurality of ~~base pairs~~ nucleotide bases spaced apart by an average spacing, the average spacing comprising a known value, by ~~determining~~ obtaining the number of ~~base pairs~~ nucleotide bases ~~in the genomic material~~ in a single strand of the target nucleic acid chain, in the case of double-stranded molecules not including the number of nucleotide bases in the complementary strand; and multiplying ~~the~~ said number of ~~base pairs~~ nucleotide bases by the known value for the average spacing between ~~base pairs~~ the nucleotide bases;

determining a first resonant frequency ~~of the genomic material~~ to influence the medium-sensitive target nucleic acid chain in ~~one~~ a first electromagnetic frequency range by dividing the velocity of the electromagnetic ~~radiation through~~ emission in the surrounding medium by the ~~wavelength~~ length parameter of the ~~genomic material~~ target nucleic acid chain;

multiplying or dividing the first resonant frequency by a factor of a power of two to provide a second resonant frequency in another electromagnetic frequency range;

dividing the number of nucleotide bases into a constant, said constant constituting a shortened version of the aforesaid entire mathematical procedure;

programming the ~~frequency-emitting~~ frequency-capable emission device to emit the ~~second~~ either first or second resonant frequency; and

selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency ~~in the another electromagnetic frequency range~~ when the ~~frequency-emitting~~ frequency-capable emission device emits ~~the~~ said first or second resonant frequency into the medium surrounding the target ~~genomic material~~ nucleic acid chain.

2. (Currently Amended) The method of claim 1, wherein determining the ~~wavelength~~ length parameter of the ~~genomic material~~ target nucleic acid chain comprises ~~measuring~~ using the known spacing value between adjacent ~~base pairs~~ nucleotide bases and multiplying the number of ~~base pairs~~ nucleotide bases in the ~~genomic material~~ target nucleic acid chain by the ~~measured~~ known spacing value between adjacent ~~base pairs~~ nucleotide bases, and using the resulting value as a wavelength parameter.

3. (Canceled)

4. (Currently Amended) The method of claim 1, wherein the medium surrounding the ~~genomic material is in vivo tissue having~~ target nucleic acid chain has a unique electrical permittivity, wherein determining the velocity for the propagation of ~~the~~ electromagnetic ~~radiation through~~ emission in the medium surrounding the ~~genomic material~~ target nucleic acid chain comprises ~~relating the unique electrical permittivity of in vivo tissue to the velocity,~~ obtaining the unique electrical permittivity value for the medium under consideration, and then determining said medium-associated velocity, wherein velocity = ~~$1 / \sqrt{(\varepsilon_0 \mu_0)}$, where ε_0 is electrical permittivity, and μ_0 is magnetic permeability.~~ $1 / \sqrt{(\varepsilon \mu)}$, where ε is the electrical permittivity of the medium, and μ is the magnetic permeability of the medium.

5. (Currently amended) The method of claim 4, further comprising the step of determining a refractive index of the electromagnetic ~~radiation through~~ emission in the in-vivo tissue by dividing the speed of light in a vacuum by the speed of light in the in-vivo tissue, wherein dividing one ~~therapeutic~~ resonant frequency determined for the ~~genomic material~~ target nucleic acid chain surrounded by air by the refractive index for in-vivo tissue yields one of the ~~therapeutic~~ resonant frequencies for the ~~genomic material~~ target nucleic acid chain surrounded by in-vivo tissue.

6. (Currently amended) The method of claim 1, further comprising the steps of:

multiplying the first or second resonant frequency ~~in another electromagnetic frequency range~~ by a positive integer to determine harmonic frequencies,

dividing the first or second resonant frequency by a positive integer to determine subharmonic frequencies,

programming the ~~frequency-emitting~~ frequency-capable emission device to emit the harmonic ~~and~~ and/or subharmonic frequencies, and

selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency, ~~in another electromagnetic frequency range and~~ and/or the harmonic ~~and~~ and/or subharmonic frequencies when the ~~frequency-emitting~~ frequency-capable emitting device emits the first or second resonant frequency ~~and~~ and/or the harmonic ~~and~~ and/or subharmonic frequencies into the medium surrounding the target ~~genomic material~~ nucleic acid chain.

7. (Currently amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain comprises debilitating the target ~~genomic material~~ nucleic acid chain.

8. (Currently amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain comprises stimulating the target ~~genomic material~~ nucleic acid chain.

9. (Currently Amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency comprises selectively influencing ~~genomic material~~ nucleic acid chains present in humans.

10. (Currently Amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency comprises selectively influencing ~~genomic material~~ nucleic acid chains present in animals.

11. (Currently Amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency comprises selectively influencing ~~genomic material~~ nucleic acid chains present in agricultural settings.

12. (Currently Amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency comprises selectively influencing ~~genomic material~~ nucleic acid chains present in water systems.

13. (Currently Amended) The method of claim 1, wherein selectively influencing the target ~~genomic material~~ nucleic acid chain with the first or second resonant frequency comprises selectively influencing ~~genomic material~~ nucleic acid chains present in food processing systems.

14. (Currently amended) The method of claim 1, wherein the medium surrounding the ~~genomic material~~ target nucleic acid chain is in-vivo tissue, further comprising the steps of:

determining for the ~~genomic material~~ target nucleic acid chain in a medium of air the first resonant frequency in one electromagnetic frequency range and the second resonant frequency in another electromagnetic frequency range, and

~~multiplying~~ dividing each of the first resonant frequency in one electromagnetic frequency range and the second resonant frequency in another electromagnetic frequency range determined for the ~~genomic material~~ target nucleic acid chain in a medium of air by the ~~square~~

~~root of two~~ refractive index for in-vivo tissue to yield corresponding resonant frequencies for the ~~genomic material~~ target nucleic acid chain surrounded by in-vivo tissue.

15. (Cancelled)
16. (Cancelled)
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